

Saudi Space Activities

National Satellite Technology Program

KACST

April 2010

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- Space Technology Strategy under Saudi National Science, Technology and Innovation Plan
 - Saudi Arabian Space Program at KACST:
 - National Satellite Technology Program
 - 12 Satellites in 10 years
 - 150+ Saudi Satellite specialists
 - World-Class AIT Facility
 - Scientific Missions : GP-B, STAR, STEP
 - Space Research Institute
 - Saudi Center for Remote Sensing
 - GIS Center
-

National Science and Technology Policy:

Origins and Achievements

KACST was directed by its charter:

- **to “propose a national policy for the development of science and technology and to devise the strategy and necessary plans to implement them.”**
 - **to coordinate with government agencies, scientific institutions and research centers in the Kingdom to enhance research; exchange information and expertise; and avoid duplication of effort.**
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National Science and Technology Policy:

Origins and Achievements

The Kingdom is the first in the region to embark on a national S&T policy

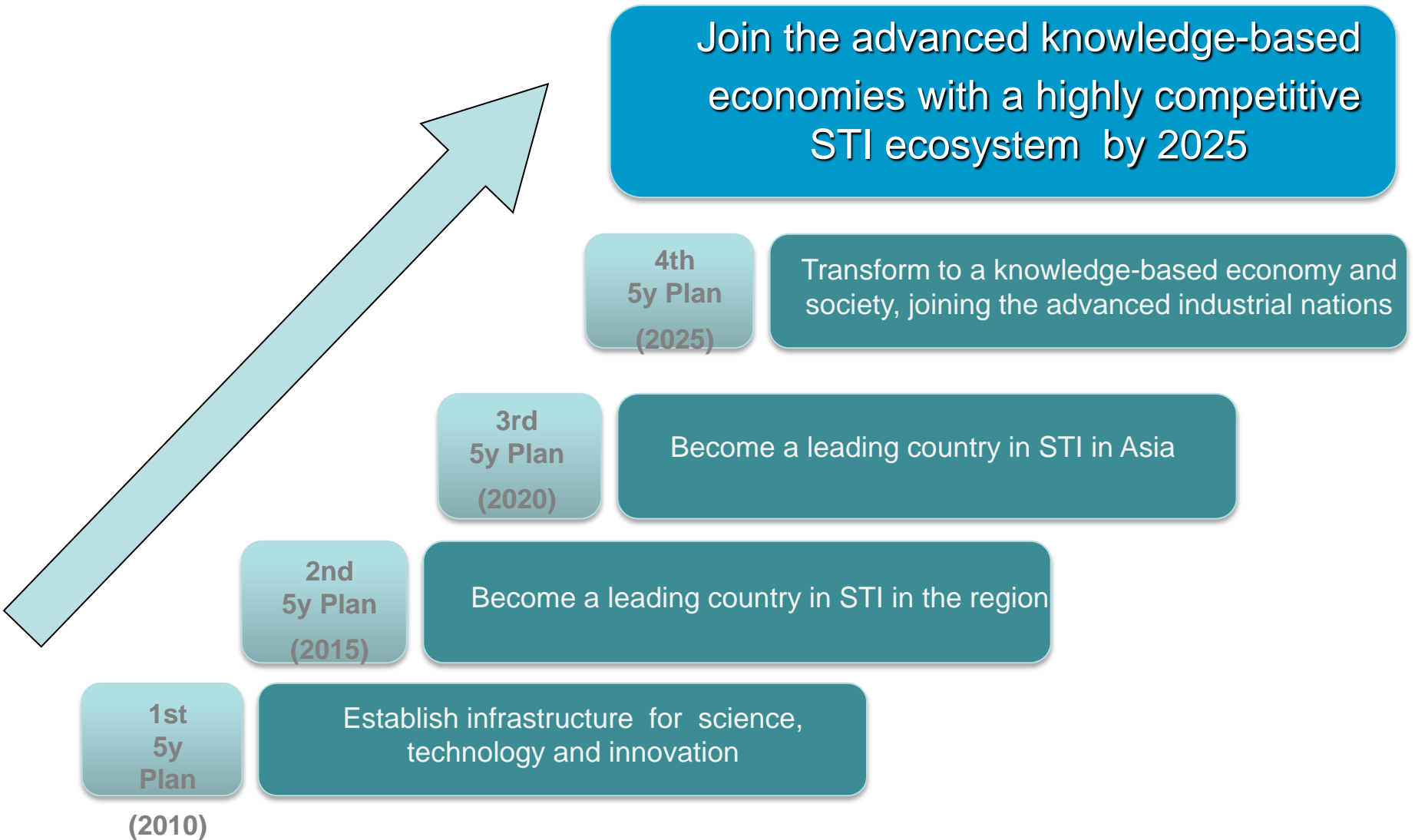
Three years of intense deliberations with stakeholders

Over 500 participants from research, academia, industry, government and non-governmental organizations

The Council of Ministers approved the comprehensive National Science and Technology Policy on the 8th of July 2002

KACST-Ministry of Planning Collaboration

Long-term Vision



Programs and Technology Priorities

PROGRAMS

Identify strategic and advanced technologies

Further scientific research & technical development capabilities

Transfer, develop and localize technology

Science, technology and society

Scientific and technical human resources

Diversify financial support resources

Technology Priorities for the Kingdom

Advanced Technologies of
Strategic Importance to the Kingdom

Water

Oil and Gas

SPACE AND AERONAUTICS

Petrochemicals

Nanotechnology

Biotechnology

Information Technology

Electronics and Communications

Energy

Environment

Advanced Materials

Space Technology Strategy

Priority Areas in Space Platforms

- **Areas**
 - Earth observation
 - Navigation
 - Telecommunications
 - Geodesy
 - Space science and Space Environment
 - **Applications**
 - Development of Satellite Systems
 - Space Services
 - Science Missions
-

Space Technology Strategy

Priority Areas in Remote Sensing and GIS

- **Areas**
 - Change detection and monitoring
 - Natural hazards
 - National spatial data infrastructure
 - **Applications**
 - Urban development
 - Vegetation
 - Pattern recognition
 - Dust storms
 - Flood
 - Fires (forest, brush-fires)
 - Regulations and standards
 - Intelligent transport systems
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Overview

- The Saudi satellite program started in 1998
 - Satellite Technology Center established within Space Research Institute at KACST
 - SaudiSat 1A &1B launched September 2000, later designated Saudi-Oscar 41 and 42 by AMSAT
 - Goal to build Saudi human capital and the infrastructure needed for a commercial satellite program
 - SaudiSat 1C launched December 2002, transmitted live images via its on-board camera, later designated Saudi-Oscar 50
 - First experimental earth observation satellite; SaudiSat 2 launched June 2004
 - Saudi satellite program began commercial activities in 2004 with launch of Saudi-ComSat
 - First Saudi remote sensing satellite; SaudiSat 3 launched 2007
 - Establishment of the National Satellite Technology Program (NSTP) in 2007
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National Satellite Technology Program

The most advanced satellite program in the region

- Developed, Manufactured, Tested, Launched and Operated
 - 10 satellites for data communications
 - 2 Remote Sensing satellites



National Satellite Technology Program

Currently established (at KACST)

- design and production facility
- AIT facility
- two ground stations

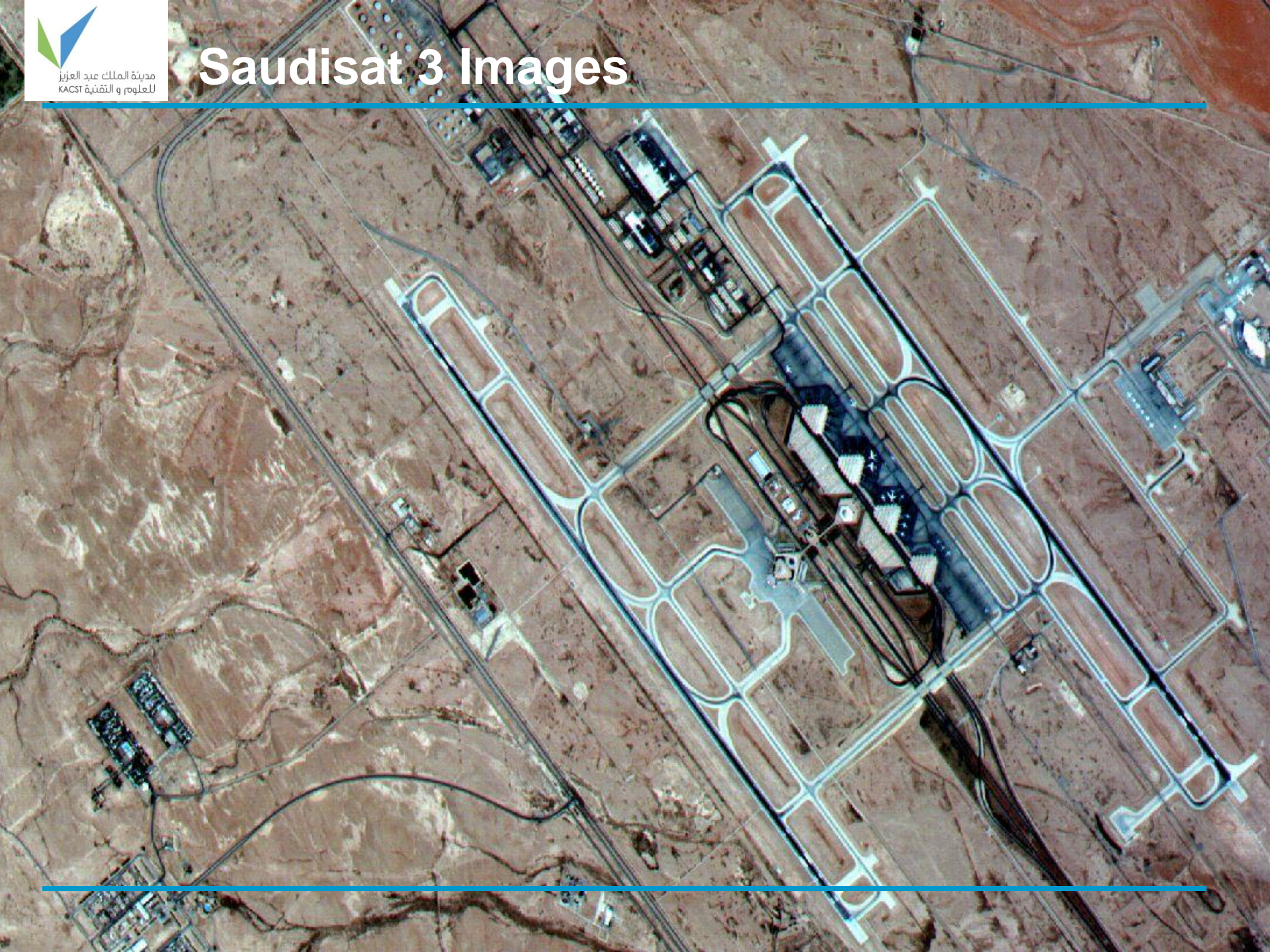
Recruited and Trained more than 150
nationals and growing



Saudi Satellites

Satellites	Launch Date	Mission	Highlights
Saudisat 1 A	2000	Data Communications	Opened for Amateurs
Saudisat 1 B	2000	Data Communications	Opened for Amateurs
Saudisat 1 C	2002	Data Communications	First Video Imaging
Saudisat 2	2004	Remote Sensing	HR Video Imaging
Saudicomsat 1	2004	Data Communications	Commercial Applications
Saudicomsat 2	2004	Data Communications	Commercial Applications
Saudicomsat 3	2007	Data Communications	Commercial Applications
Saudicomsat 4	2007	Data Communications	Commercial Applications
Saudicomsat 5	2007	Data Communications	Commercial Applications
Saudicomsat 6	2007	Data Communications	Commercial Applications
Saudicomsat 7	2007	Data Communications	Commercial Applications
Saudisat 3	2007	Remote Sensing	Commercial RS – 2.5 m Pan

Saudisat 3 Images



Saudisat 3 Images



KACST focuses on Space scientific research and development and enters in international collaboration agreements with the leading agencies.

- **International Collaborations**

- **Stanford University**

Gravity Probe B data analysis, UV LED flight experiment, Spacecraft Bus design and launch, Angular Grating flight experiment, Spacecraft Bus design and launch, Space Time Asymmetry Research (STAR)

- **NASA**

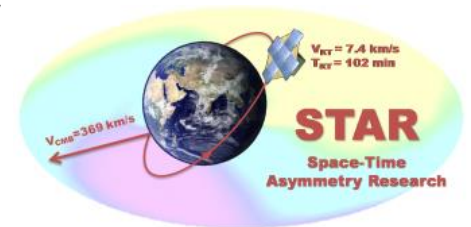
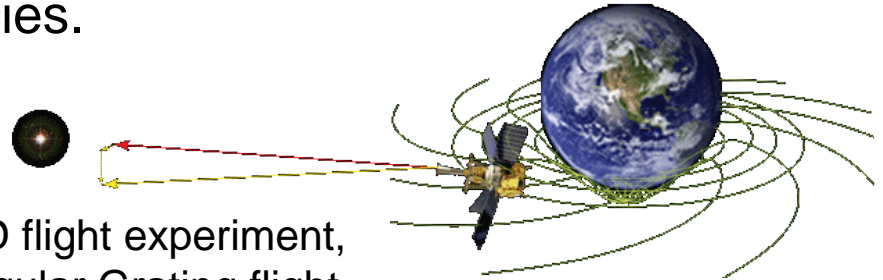
- **NASA Lunar Science Institute (NLSI)**

Saudi Lunar and Near Earth Object Science Center an affiliate research center

- **NASA Ames Research Center** (STAR in collaboration with Stanford University, UV LED, Angular Grating, LEO science and technology demonstrator missions)

- **Texas A&M University**

Near Earth Object studies

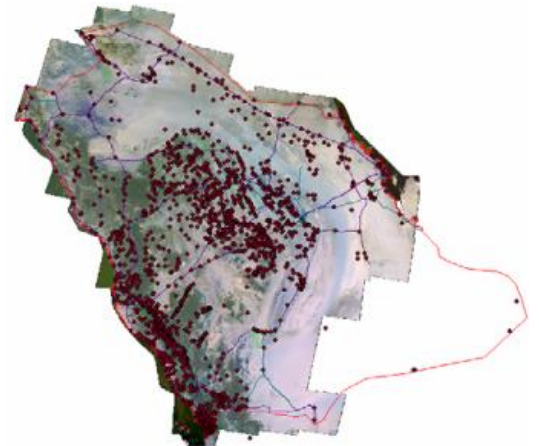


Saudi Center for Remote Sensing and GIS Centers

SCRS receives, provides and distributes space related information to private and public sectors. In addition, it conducts remote sensing applied research to help with the Kingdom's development efforts and provides KACST GIS (Geographic Information Systems) Center with all corrected satellites images.



GISC conducts applied research and studies on GIS and leads the unification of the national standards and specifications of GIS, sets the regulations, and controls of information exchange and update. Develops various models of GIS and implements joint projects with related bodies.



Thank you ..
